

CLAIMS

What is claimed is:

1. A decision support system for use in supporting business units including electricity energy production operations, electricity energy contract sales, management, and supplies, said system comprising:

a contract valuation model for determining a value of existing and potential electrical energy contracts;

a financial position management model for supporting purchases and sales of energy related financial instruments;

a potential action valuation model for providing a value of potential short term electrical energy sales opportunities;

a forecasting and planning model for providing forecasts of commodity prices utilized by said contract valuation model and said financial position model;

a risk management model to provide risk tolerance factors for utilizing said forecasts;

a supply chain optimizer model for optimizing supply routing and schedules; and

a data delivery engine for supplying data to said contract valuation model, said financial position management model, said potential action valuation model, said forecasting and planning model, said risk management model, and said supply chain optimizer model.

2. The system of Claim 1, wherein said potential action valuation model utilizes values from said contract evaluation model for comparison.

3. The system of Claim 1, further comprising data streams to said data delivery engine comprising customer data, asset data, vehicle data, real time commodity data, and weather data.

4. The system of Claim 3, further comprising data streams from said delivery engine to said potential action valuation model comprising commodity pricing, and asset data.

5. The system of Claim 3, further comprising data streams from said data delivery engine to said contract valuation model comprising real time commodity pricing, real time weather, and contract terms.

6. The method of Claim 3, further comprising data streams from said data delivery engine to said supply chain optimizer comprising delivery schedules, route information, and driver schedules.

7. A method for a decision support system for purchasing and selling electricity, said method comprising:

providing a forecasting model for producing long term and short term forecasts of commodity prices utilizing historical and real time data;

providing a contract evaluation model in communication said forecasting model for evaluating existing and potential electrical delivery contracts based on real time commodity prices and forecasted commodity prices;

providing risk tolerance model to enter risk tolerance criteria for use with said forecasted commodity prices; and

providing a potential action evaluation model for evaluating a plurality of potential opportunities of sales of electricity with specific starting and ending times based on said real time data and real time output capabilities of a plurality of electrical generating units.

8. The method of Claim 7, further comprising displaying said plurality of potential opportunities of sales of electricity said specific starting times and ending times with respect to costs and potential profits and generating capacity.

9. The method of Claim 9, further comprising displaying potential opportunities of sales for a plurality of generating facilities wherein each of said generating facilities comprise a respective plurality of electrical generating units.

10. The method of Claim 8, further comprising displaying a plurality of scenarios for at least one of said potential opportunities of sales.

11. The method of Claim 7, further comprising providing one or more electricity customers with access to said decision support system for the purpose of entering potential opportunities into said decision support system.

12. The method of Claim 7, further comprising providing a data delivery engine to supply data to said forecasting model, said contract evaluation model, and said potential action

evaluation model.

13. The method of Claim 7, wherein said data delivery engine receives data related to asset profiles, said real time data, real time weather data, and contract profiles.

14. The method of Claim 7, further comprising a supply chain optimizer operable for monitoring supplies to a plurality of electricity generating facilities wherein each of said generating facilities comprise one or more electrical generating units.

15. The method of Claim 14, further comprising utilizing said data delivery engine to supply data to said supply chain optimizer related to driver schedules, routes, customer profiles, and production information.

16. A decision support system to support generation and consumption of electrical power, said decision support system comprising:

a plurality of interconnected models wherein each model is operable for producing decision support, said plurality of interconnected models comprising a contract valuation model for generating a value for existing and potential contracts for said electrical power, a potential action valuation model for generating a value for potential, predefined operation actions at a given production facility, a supply chain optimizer, a financial management model for use in managing ongoing use of financial positions related to energy commodities, a risk management model to allow entry of risk tolerance parameters, and a forecasting and planning model, said forecasting and planning model supplying commodity forecast information to said contract

valuation model and said financial position model.

17. The system of Claim 16, wherein said risk tolerance parameters are provided to said contract valuation model and said financial position model.

18. The system of Claim 16, further comprising a data delivery system comprising a data delivery engine, said data delivery engine being operable for collecting a plurality of data types and for supplying said data to each of said plurality of models of said decision support system.

19. The method of Claim 18, wherein said plurality of data types comprise electrical generating assets, fuel inventories, and fleet vehicle status information.

20. The method of Claim 16, further comprising utilizing said potential action valuation model for displaying a plurality of said predefined operations for said given production facility.